December 16, 1925

A. J. Henry. The North Pacific statistical anticyclone.

January 13, 1926

O. L. Fassig.—Rainfall of the Caribbean region.

January 27, 1926

O. L. Fassig. Upper air work at San Juan.
C. F. Marvin. A proposed international temperature scale.

February 10, 1926

C. F. Marvin. Recently published investigations of meteorological periodicities.

February 24, 1926

Messrs. Weightman, Mitchell, and *Henry.* Analysis and discussion of Clayton's weather forecasts from solar radiation data.

March 10, 1926

**C. F. Brooks.* The Gulf Stream and the Weather: Project and Progress.

March 24, 1926

H. H. Kimball. Possible thermal effects of fluctuations in the solar constant, of fluctuations in insolation, and of fluctuations in ultraviolet solar radiation.
W. J. Humphreys. Measurements of ultraviolet solar radiation, and of ozone in the atmosphere.

April 7, 1926

H. C. Frankenfield. The Weather Bureau's river work in the Ohio Valley.

April 21, 1926

**C. G. Rossby.* The work of the Swedish meteorological service.

May 5, 1926

**Capt. A. H. Thiessen.* The meteorological work of the United States Signal Corps.

May 13, 1926

**C. F. Brooks.* The general problem of scientific long-range forecasting.

May 19, 1926

C. F. Marvin and *E. B. Calvert.* The Weather Bureau Service on the Pacific coast, with especial reference to fire-weather warnings.

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HAILSTORM AT DALLAS, TEX., MAY 8, 1926

By JOSEPH L. CLINE

[Weather Bureau Office, Dallas, May 10, 1926

On the morning of May 8, 1926, the northern portion of eastern Texas was in the southeast quadrant of a fairly well marked depression with a trough formation extending northward from the lower Rio Grande Valley. A warning of local thunderstorms was issued at Dallas on this morning.

The sky on the 8th was generally clear to partly cloudy, and the temperature rose from 65° F., at 4 a. m. to 85° at 5 p. m. The sun shone brightly in the afternoon, with no local indications of any disturbance except a slowly falling barometer, until 4:10 p. m., when a heavy bank of clouds came from the north and northwest, covering the sky by 4:40 p. m. Rain began at 6:59 p. m., and hail fell with the rain from 7:04 p. m. to 7:25 p. m., the barometer having reached its lowest point, 29.59 inches, at about 7:10 p. m., after which a sharp rise of 0.08 inch occurred. Vivid lightning attended the storm, but there were no unusual meteorological conditions except the unprecedented hailstorm. The storm moved toward the southeast, its center passing slightly east of the station.

Hail fell over an area 1 to 15 miles wide, from about 25 miles north of Dallas to more than 25 miles southeast of Dallas, the region of heaviest hail and greatest damage extending from about 10 miles north of the city southward over the central and eastern portions of it to about 15 miles southeast of the Weather Bureau station. No rain or hail fell 10 miles southwest of the station and none in the southwest portion of Oak Cliff.

Hailstones of various sizes and shapes were reported. Some were compared in size to hen's eggs and others to baseballs, while on the outer edge of the storm they were as small or smaller than common moth balls. Near White Rock Lake some of them measured 7 inches in circumference the long way and 5 inches round the body. Hailstones which fell in Highland Park, 5 miles north of the Weather Bureau station, measured 2 to 4 inches in diameter, some being as large as and having the shape of good-sized cooking squash. Reliable reports indicate that the largest hailstones were 8 to 12 inches in circumference, having 5 to 8 layers, some of the stones weighing 22 ounces. Mr. P. S. Cook, observer, who was in the storm near the Weather Bureau office, measured one hailstone 4.2 inches in diameter.

Damage by hail and wind to structures in Dallas and Dallas County was estimated at more than three-quarters of a million dollars. In buildings in the business section of the city plate-glass windows, glass in windows on northern exposures and in most skylights were broken. Many residences will have to be supplied with new roof coverings, especially in the southeastern part of the city, where roofs of composition, tile, and old shingles were demolished. Tops of automobiles and street cars were punctured by the hailstones. The damage at its worst was so great that the scene in the streets resembled destruction by machine-gun fire.

Scores of people were injured, none fatally. A few horses and other animals were reported to have been killed. Crops and much fruit were destroyed, though the area of total loss of these was small. The sunshine recorder was the only instrument broken by hail at the Weather Bureau office.

METEOROLOGICAL SUMMARY FOR SOUTHERN SOUTH AMERICA, APRIL, 1926

By Señor J. B. NAVARRETE

[El Salto Observatory, Santiago, Chile]

(Translated by B. M. V.)

The atmospheric régime over Chile during April was relatively stable, and it was somewhat rainy in the southern zone.

High pressure in the south during the 2d–4th caused generally fine weather in southern South America.

Between the 5th and 7th an important depression crossed the far southern region, causing rain over the southern part of the continent as far north as Arauco Province. At Valdivia 15 mm. fell on the 6th.

During the 8th–14th high pressure occupied the southern area, causing generally fine weather and low temperature, with cold waves in the southern Provinces and minima below freezing in Lonquimay.

On the 15th a new depression crossed the far south, giving bad weather and rains as far as Valdivia; 15 mm. fell at this farthest point where rain occurred.

From the 16th to 23d the weather was in general better, under prevailingly high pressure in the south.

On the 23d an important depression began to influence southern South America, bringing on a period of bad weather and rains which lasted until the 29th, when the pressure became definitely higher. The maximum precipitation was observed on the 29th, at Valdivia, 44 mm.

A new barometric decline began on the 30th.

METEOROLOGICAL SUMMARY FOR BRAZIL, APRIL, 1926

By FRANCISCO SOUZA, Acting Director

[The Meteorological Office, Rio de Janeiro]

During April the circulation of the lower atmosphere continued about as intense as in the preceding month, the anticyclones in the meantime being observed to move along meridional paths. The semipermanent anticyclone of the Atlantic appears to have had less influence over the continent. The continental depression, and those migrating from high latitudes, were less active.

Over the whole country the amount of rainfall received was rather great, the rivers Poty and Saõ Francisco continuing in a state of flood, as did also the Parintins, the Mearim, and the Itapicurú. In the Province of Rio Grande do Sul excessive rainfalls were recorded, which were abnormal for the season.

The weather in Rio de Janeiro was in general unsettled, 13 cloudy days being recorded, with the rainiest period observed on the 14th–17th. Temperature remained below normal during the last two decades of the month, though in the first decade some high temperatures occurred.

Crops in general did well, except milo, which in Rio Grande do Sul suffered from lack of rain, and coffee which in some localities did not come up to expectations.

The yield of the cereal and vegetable crops was satisfactory, though the same was not the case with beans in the central region of the country.—*Translation.*

BIBLIOGRAPHY

C. FITZHUGH TALMAN, Meteorologist in Charge of Library

RECENT ADDITIONS

The following have been selected from among the titles of books recently received as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies:

Agius, Thomas.
The gregale. Malta. [1926.] p. 3–17. 24½ cm. (Repr.: Archivum Melitense.)

Argentina. Oficina meteorológica.
Predicción del tiempo. El pronóstico semanal del estado del tiempo de la Oficina meterológica Argentina. Buenos Aires. 1926. 3 p. figs. 23½ cm. (República Argentina. Min. de agric. Sec. propaganda e informes. Circ. no. 596. Marzo 25, 1926.)

Breitfuss, Leonid.
Die Erforschung des Polargebietes Russisch-Eurasiens, See- und Landreisen während der Jahre 1912–24. Gotha. 1925. vi, 113 p. tables (fold.) 28 cm. (Petermanns Mitteilungen. Ergänzungsheft Nr. 188.)

Coblentz, W. W.
Frost flowers. The result of exudation of ice from the stems of plants. p. 682–684. illus. 30 cm. (Cutting from Amer. forests, v. 31, Nov., 1925.)

Coleman, Arthur P.
Ice ages, recent and ancient. New York. 1926. xliii, 296 p. front. illus. (incl. maps). 22½ cm.

Deutsche Atlantische Expedition auf dem Forschungs-und Vermessungsschiff "Meteor." 77 p. figs. plates. 25½ cm. (Sonderab: Zeitschr. Gesellsch. für Erdkunde zu Berlin. Jahrg. 1926, Nr. 1.)

Deutsche meteorologische Gesellschaft.
Berliner Zweigverein der Deutschen meteorologischen Gesellschaft. Bericht 1916–1925. (33.–42. Vereinsjahr.) Berlin. 1926. 14 p. port. 22 cm.

Fieldner, A. C., *and others*
Sugar-tube method of determining rock dust in air. Washington. 1921. 42 p. figs. plates. 23½ cm. (U. S. Bur. mines. Tech. paper 278.)

Granqvist, Gunnar.
Översikt av isarna vintern 1914–15. Helsingfors. 1926. 45 p. illus. 24½ cm. (Referat: Uebersicht der Eisverhältnisse im Winter 1914–15 an den Küsten Finnlands.) (Havsforskningsinstitutets skrift N:o 37.)
Regelmässige Beobachtungen von Temperatur und Salzgehalt des Meeres im Jahre 1923. Helsingfors. 1925. 53 p. illus. 24½ cm. (Merentutkimuslaitoksen julkaisu havsforskningsinstitutets skrift n:o 34.)

Högberg, L.
Om sockerbetsodlingens klimatiska betingelser och bevattningsproblemet. Stockholm. 1926. 11 p. figs. 31½ cm. (Meddelanden Statens met.-hydrog. anstalt. Bd. 3, N:o 7.)

International research council.
First report of the commission appointed to further the study of solar and terrestrial relationships. Paris. 1926. 202 p. 25½ cm.

Italy. Servizio idrografico.
Le irrigazioni in Italia. Notizie preliminari sulla estensione delle irrigazioni, sulle modalità di esse e sui prezzi praticati nelle diverse regioni italiane. Roma. 1926. 280 p. figs. plates (part fold.) 25½ cm. (Pubb. N. 8 del servizio. vol. 1.)

Jurwa, Risto.
Jäät vuonna 1919–1920. Helsinki. 1925. iv, 139 p. figs. plates (fold.) 25 cm. (Referat: Das Meereis im Winter 1919–1920.) (Merentutkimuslaitoksen julkaisu n:o 23.)
Översikt av isarna vintern 1919–20. Helsingfors. 1926. 28 p. illus. plates. 25 cm. (Referat: Uebersicht der Eisverhältnisse im Winter 1919–20 an den Küsten Finnlands.) (Havsforskningsinstitutets skrift N:o 23.)

Laffont, J. C.
Pluie ou beau temps? Prévision du temps à faible échéance. Construction facile d'appareils météorologiques (baromètres, hygromètres, pluviomètres, néphoscopes, anémomètres, psychromètres, etc.) Paris. n. d. 147 p. illus. 17½ cm.

Maurain, Ch., *and others.*
Atlas magnétique . . . avec la collaboration de L. Eblé . . . Paris. 1925. viii, 16 p. figs. plates. 32 cm.

Merz, A.
Die Deutsche Atlantische Expedition auf dem Vermessungs- und Forschungsschiff "Meteor." I. Bericht. p. 562–586. figs. plates (fold.) 25½ cm. (Sitzungsb. preuss. Akad. Wissensch. XXXI. Sitzungsber. phys.-math. Kl. 26. Nov. 1925.)

Negretti & Zambra,
History of the thermometer. [London.] n.d. 8 p. illus. 19 cm.

Niblack, A. P.
Summary of data on wind force and the Beaufort scale. Monaco. 1926. 36 p. 27½ cm. (Internat. hydrog. bur. Spec. pub. no. 11–H. April, 1926.)

Östman, C. J.
Om stormar vid Svealands och Götalands kuster. (Les grands vents près des côtes du Svealand et du Götaland. Stockholm. 1926. 37 p. figs. 31½ cm. (Meddelanden Statens met.-hydrog. anstalt. Bd. 3 N:o 6.) [Résumé in French.]

Palmén, Erik.
Beobachtungen von Strom und Wind an den Leuchtschiffen im Jahre 1923. Helsingfors. 1925. 26 p. illus. 24½ cm. (Merentutkimuslaitoksen julkaisu havsforskningsinstitutets skrift n:o 33.)

Paredes y Castro, José García de.
Meteorología nautica y oceanografía. Ed. 2. Barcelona. [1925.] 414 p. illus. plates. 25½ cm.